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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,558	03/29/2004	Geun-soo Lee	29925/39912	1407

4743 7590 06/08/2006

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EXAMINER
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LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/811,558	LEE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sin J. Lee	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 13-16 is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. No amendment was filed with RCE filed on March 27, 2006, and thus the same rejections as addressed in the last office action mailed on March 10, 2006 are being repeated below, and the following rejections are made non-final.

#### ***Claim Objections***

2. Claims 11 and 12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 11 uses the transitional phrase "comprises" whereas present claim 7, from which claim 11 depends, has been narrowed to recited "consisting essentially of", and thus claims 11 and 12 fail to further limit the subject matter of claim 7.

#### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al (US 6,590,137 B2).

Mitchell teaches (claim 1) a multicomponent superabsorbent particle comprising at least one basic water-absorbing resin in contact with at least one acidic water-absorbing resin. As one the examples for the acidic water-absorbing resin, Mitchell teaches (claim 19) a *polyvinylphosphonic acid*. Mitchell also teaches (col.17, lines 21-28, lines 36-40) multicomponent superabsorbent particles having microdomains of the

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acidic resin and the basic resin dispersed in a continuous phase of a matrix resin, and as one of examples for the matrix resin, Mitchell teaches *polyvinyl alcohol*. Based on Mitchell's teaching, it would have been obvious to one skilled in the art to form multicomponent superabsorbent particles having microdomains of polyvinylphosphonic acid (as the acidic water-absorbing resin) and the basic water-absorbing resin dispersed in a continuous phase of polyvinyl alcohol (as a matrix resin) with a reasonable expectation of obtaining superabsorbent particles that exhibit exceptional water absorption. Also, Mitchell teaches polyvinylamine as one of examples for his basic resin (claim 15). It would have been obvious to one skilled in the art to use polyvinylamine as Mitchell's basic water-absorbing resin with a reasonable expectation of obtaining superabsorbent particles that exhibit exceptional water absorption.

*Mitchell's composition containing polyvinylphosphonic acid* (as his acidic water-absorbing resin), *polyvinyl alcohol* (as his matrix resin) and *polyvinylamine* (as his basic resin) would render obvious present inventions of claims 7, 11, and 12: It is the Examiner's position that Mitchell's polyvinylamine would not materially affect the characteristics of present composition of claim 7 because applicants are also claiming an amine compound in present claims 11 and 12. Also, it is the Examiner's position that Mitchell's particles comprising polyvinylphosphonic acid, polyvinyl alcohol and polyvinylamine would inherently be capable of being used as an organic anti-reflective coating composition.

5. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mougin (6,159,457).

In claim 2, Mougin teaches the following:

2. A method for coating keratinous substances, said method comprising:

coating said keratinous substance with a cosmetic or dermatological composition comprising an aqueous solution or an aqueous dispersion containing:

- (a) at least one non-crosslinked polymer capable of forming, after is drying, a deposit or a film on said keratinous substances, said polymer exhibiting a critical temperature  $T_c$  for solubility in water of the LCST or UCST type ranging from 0° to 100° C.; and
- (b) at least one surfactant and/or at least one hydrophilic polymer, said at least one surfactant and said at least one hydrophilic polymer not exhibiting a critical temperature  $T_c$  of the LCST or UCST type ranging from 0° to 100° C.,

wherein said at least one surfactant and/or said at least one hydrophilic polymer is capable of establishing a physical interaction with said at least one non-crosslinked polymer.

As example for the "at least one hydrophilic polymer", Mougin includes polyvinyl alcohol and polyvinylphosphonic acid polymer (see col.5, lines 13-35). Since Mougin teaches that there can be at least one hydrophilic polymer, it would have been obvious to one skilled in the art to use both polyvinyl alcohol and polyvinylphosphonic acid as the hydrophilic polymers in Mougin's composition with a reasonable expectation of obtaining a film exhibiting satisfactory mechanical and cosmetic properties which do not change in the envisaged cosmetic application. Also, as one of the examples for the non-crosslinked polymer, Mougin discloses polyvinyl alcohol (see col.4, lines 17-20, lines 39-40). It would have been obvious to one skilled in the art to use polyvinyl alcohol as Mougin's non-crosslinked polymer with a reasonable expectation of obtaining a film exhibiting satisfactory mechanical and cosmetic properties which do not change in the envisaged cosmetic application. Mougin also teaches (col.5, lines 36-41) that those hydrophilic polymers are present in the composition in the preferred amount of 10-30% by weight. Assuming one uses the polyvinyl alcohol and polyvinylphosphonic acid in

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equal amount, this will give 5-15% by weight for each polymer. Mougin also teaches amine salts and ammonium salts as some of examples of the surfactant to be used in his composition discussed above (see col.5, lines 52-61). Thus, *Mougin's composition containing polyvinyl alcohol (as Mougin's non-crosslinked polymer), polyvinyl alcohol and polyvinylphosphonic acid polymer (as Mougin's hydrophilic polymer), and amine salts (as Mougin's surfactant)* renders obvious present inventions of claims 7-12. It is the Examiner's position that Mougin's amine salts would not materially affect the characteristics of present composition of claim 7 because applicants are also claiming an amine compound in present claims 11 and 12. It is also the Examiner's position that Mougin's composition comprising polyvinylphosphonic acid, polyvinyl alcohol and amine salts would inherently be capable of being used as an organic anti-reflective coating composition.

#### ***Allowable Subject Matter***

6. Claims 1-6 and 13-16 are allowed. None of the cited prior arts teaches or suggests present method of forming a pattern as claimed in present claim 1 or claim 13.

#### ***Response to Arguments***

7. Applicants argue that Mitchell's composition and Mougin's composition must contain additional materials required for the intended uses and that those additional materials would materially affect the characteristics of the present coating composition.

However, even if those additional materials mentioned in Mitchell and Mougin were to materially affect the characteristics of present coating composition, those additional materials are not required materials in those references. The only

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constitutional elements in Mitchell's particle composition are basic water-absorbing resin, acidic water absorbing resin and a matrix resin. As already discussed above, polyvinylamine, which is disclosed as one of examples for Mitchell's basic resin, would not materially affect the characteristics of present coating composition because applicants themselves are claiming an amine compound in claims 11 and 12. Also, Mougin specifically states that his invention **can** (not "must") contain adjuvants usually found in the cosmetic and dermatological fields (col.7, lines 61-63). Therefore, it is still the Examiner's position that *Mitchell's composition containing polyvinylphosphonic acid* (as his acidic water-absorbing resin), *polyvinyl alcohol* (as his matrix resin) and *polyvinylamine* (as his basic resin) would render obvious present inventions of claims 7, 11, and 12 and that Mitchell's particles comprising polyvinylphosphonic acid, polyvinyl alcohol and polyvinylamine would inherently be capable of being used as an organic anti-reflective coating composition. Also, it is still the Examiner's position that *Mougin's composition containing polyvinyl alcohol (as Mougin's non-crosslinked polymer), polyvinyl alcohol and polyvinylphosphonic acid polymer (as Mougin's hydrophilic polymer), and amine salts (as Mougin's surfactant)* renders obvious present inventions of claims 7-12 and that Mougin's composition comprising polyvinylphosphonic acid, polyvinyl alcohol and amine salts would inherently be capable of being used as an organic anti-reflective coating composition.

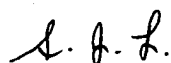
For the reasons stated above, present rejections over Mitchell and Mougin still stand.

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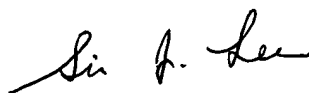
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee  
June 6, 2006



**SIN LEE**  
**PRIMARY EXAMINER**